Infection Control Quality Assurance & Performance Improvement (QAPI) Case Study

Scenario 1: Following Quality Assurance (QA)

The Facility
Starview Convalescent Center is a 60-bed long-term care facility. The facility is divided into two units: Unit A, which mostly comprises long-term residents, and Unit B, housing short-term residents. While reviewing the quarterly CASPER report, the team noticed that the UTI quality measure was high at 15.5 percent as compared to the State (3.7 percent) and national (4.9 percent) averages. The team decided to look into all residents listed as having had UTI. The majority of these residents were housed in Unit A and numerous residents had experienced repeated UTI in the last three months.

The Issue
Starview Convalescent Center had an increased incidence of UTI over the last three months based on the CASPER report indicating 15.5 percent as compared to the State (3.7 percent) and national (4.9 percent) averages. These incidents seem to be affecting the patient population in Unit A of the facility.

The Interventions
- Maintained surveillance log with QA review and IDT involvement.

The facility's IDT team developed a plan of correction (POC), which contained the following components:
- Reviewing the infection control policy and procedure.
- Conducting a chart audit of all residents with recurrent UTIs.
- In-servicing the nursing department (licensed nurses and CNAs) on the infection control policy and procedure.
- The director of staff development (DSD) conducting three monthly audits of medication administration records (MARs) and chart of residents taking antibiotics.
- Reporting audit results to the IDT.

The director of nursing (DON) will monitor the above areas for compliance. The interdisciplinary team members agreed upon the POC.
Infection Control QAPI Case Study
Scenario 2: Following QAPI

The Facility
Starview Convalescent Center is a 60-bed long-term care facility. The facility is divided into two units: Unit A, which mostly comprises the long term residents, and Unit B, housing short-term residents. While reviewing the quarterly CASPER report, the team noticed that the UTI quality measure was high at 15.5 percent as compared to the State (3.7 percent) and national (4.9 percent) averages. The team decided to review the records of all residents listed as having had UTI. The majority of residents were found to be housed in Unit A and numerous residents had experienced repeated UTI in the last three months.

The Issue
Starview Convalescent Center had an increased incidence of UTI over the last three months based on the CASPER report indicating 15.5 percent as compared to the State (3.7 percent) and national (4.9 percent) averages. These incidents seem to be affecting the patient population in Unit A of the facility.

Facility UTI CASPER Data

<table>
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<tr>
<th>Measure Description</th>
<th>CMS ID</th>
<th>Data</th>
<th>Num</th>
<th>Denom</th>
<th>Facility Observed Percent</th>
<th>Facility Adjusted Percent</th>
<th>Comparison Group State Average</th>
<th>Comparison Group National Average</th>
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<td>UTI (L)</td>
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<td>58</td>
<td></td>
<td>15.5%</td>
<td>15.5%</td>
<td>3.7%</td>
<td>4.9%</td>
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</table>

The Interventions

- Trended data.
- Started a performance improvement project (PIP).
- Set a SMART goal.
- Used root cause analysis (RCA) to determine the causes of the high incidence of UTI in Unit A.
- Involved patients, family, and staff.
- Used the Plan-Do-Study-Act (PDSA) Model.
- Implemented PIP and spread improvements to Unit B.

The facility created an infection control team and decided to appoint the assistant director of nursing (ADON) as the infection control officer (ICO). The team consisted of the following: ADON, DSD, a charge nurse, a CNA, a nurse practitioner working under the facility medical director, pharmacist consultant, and MDS coordinator—all associated with Unit A. The team decided to meet bi-monthly until the number of incidents decreased and new policies and procedures were implemented, then monthly thereafter.
The team also decided to adapt QAPI and start a PIP to address this issue because this trend posed high-risk and quality-of-life problems for residents.

The infection control team chose to complete the PIP charter based on the current issue.

**Step-by-Step PIP Process**

The team decided to complete the PIP charter to have a clear outline of each step and what each team member is tasked to do. By defining each key charter component, team members and the team as a whole have a clearer understanding of what they are endeavoring to accomplish.

**TIP:** Conducting a performance improvement project (PIP) is helpful to examining and improving care or services in areas identified as needing attention.

**TIP:** Refer to the performance improvement project charter sample.

Based on their needs, the team decided to select the key members of the PIP team.

**TIP:** The infection control team does not necessarily have to involve only staff members assigned to the PIP team.
The team decided to focus PIP efforts on the increased incidence of UTI. Based on the CASPER Report, the UTI quality measure (QM) was at 15.5% as compared to the State (3.7%) and national (4.9%) averages.

Current project name: **Reduction of Incidence of UTI in Unit A**

The PIP team set a specific, measureable, attainable, relevant, time-bound (SMART) goal for UTI reduction in Unit A of the facility which would then affect overall CASPER data.

SMART goal: **Decrease the percentage of UTI in Starview Convalescent Center from 15.5% to 4.9% by December 31, 2016, based on the facility CASPER Report.**

In the initial PIP meeting, the team decided to conduct an RCA to determine the causes of the high incidence of UTI in Unit A.
**RCA Fishbone Sample**

To decrease the percentage of UTI in Starview Convalescent Center from 15.5% to 4.9% by December 31, 2016 based on the facility CASPER Report.

**Goal:**

**Category:** People

- No system to track infections
- MDS coding errors in 5 resident assessments
- Staff not following hand washing P&P
- No hand washing skills check

**Category:** Environment

- Major of the residents who had UTI were in unit A
- Staff did not follow P&P related to catheter use
- Last infection control in-service x 1 year ago
- Majority of residents who had UTI were LTC residents

**Problem:**

- UTI QM of 15.5% based on CASPER Report

**Potential Categories:**

1. Processes/Methods
2. Environment
3. Materials/Equipment
4. People

**Summary of RCA Exercise**

- Majority of the residents with UTI had rooms in Unit A of the facility.
- Majority of the residents in Unit A were long-term care (LTC) residents.
- No system was in place to track infections weekly. Tracking was conducted once monthly, before the utilization review (UR) meeting.
- Multiple residents with Foley catheter had no indication for use.
- Residents with pressure ulcers on Foley catheter developed signs and symptoms of UTI.
- Residents with Foley catheters developed UTI.
- The last infection control in-service was conducted one year ago.
- UTI was checked on Section I in five resident MDS assessments which did not follow the MDS coding guidelines for UTI.
- No policy and procedure existed to audit MDS assessments monthly.
- The new housekeeper was not properly oriented in the infection control protocol policy and procedure.
- Proper hand-hygiene techniques were not followed.
- A few of the residents with repeat UTIs had UTI upon admission from the acute hospital.
- Staff members were not following proper hand-washing techniques.

**TIP:** Performing a root cause analysis can help those involved to focus on issues over which they have more control and to prioritize issues most easily addressed.
After the team identified issues based on the RCA exercise, they decided to list action items. They planned to apply selected interventions on a smaller scale in Unit A, which housed 30 residents.

**Action Plan Items**

**Education**
- Educate all staff on their responsibility to prevent UTI.
- Educate environmental services staff on proper cleaning techniques.
- Conduct competency testing for nurses and nursing assistants on proper urinary catheter care and perineal care.
- Conduct competency testing for nurses and nursing assistants on proper hand-washing techniques.
- Provide/send MDS nurse to an MDS training course.
- Provide/send wound care/treatment nurse to a wound training course.
- Provide education to residents, family members, and/or significant others about ways to prevent UTI.

**System Changes**
- Enhance communication procedures.
- Start a pre-shift huddle with all staff on duty during each shift.
- Ensure that new employees are oriented to the proper policies and procedures.
- Modify miscoded MDS assessments.

**Policy Changes**
- Review infection prevention policies and procedures to ensure that they are consistent with current guidelines.
- Review MDS policies and procedures to ensure that they are consistent with current guidelines. Modify if needed.

**TIP:** Prioritize action plans based on the items identified in the RCA. Team members need not accomplish all listed action plans at the same time.

The team decided to start a pilot on a smaller scale and conducted the project in Unit A, the unit with the high incidence of UTI. They also decided to apply PDSA to test out the interventions from their action plan.

**TIP:** During a PIP, the team should attempt some changes and then see whether or not they made a difference in the area targeted for improvement using the PDSA cycle.
The Results
At the end of six months, the team noted a decrease in the number of residents in Unit A who developed UTI.

By looking at the data, the team can see the results of the effectiveness of interventions implemented in Unit A.

As a result of the interventions, the team also noted that their UTI quality measure improved to 4.9 percent based on their current CASPER report, which is the same as the national average. Since they met the initial goal, the team decided on a stretch goal of 3.7 percent, the State average, which they set for accomplishment within the next three months (March 2017).

TIP: Looking at data in graphic form helps in determining effectiveness of interventions in relation to CASPER data and in comparing those data to the State and national averages.
As a result, the team decided to adopt and expand the interventions to the other unit of the facility.

Using QAPI allowed staff members at Starview Convalescent Center the opportunity to identify and correct developing issues before they escalated.